WHAT IS CLAIMED IS:

1. An alkaline battery comprising:
a cathode comprising nickel oxyhydroxide and a gold salt;
an anode comprising zinc;
a separator between the anode and the cathode; and
an alkaline electrolyte.

2. The battery of claim 1, wherein the nickel oxyhydroxide includes beta-nickel oxyhydroxide.

3. The battery of claim 1, wherein the nickel oxyhydroxide includes gamma-nickel oxyhydroxide.

4. The battery of claim 1, wherein the nickel oxyhydroxide includes a mixture of beta-nickel oxyhydroxide and gamma-nickel oxyhydroxide.

5. The battery of claim 1, wherein the nickel oxyhydroxide includes unfractured, substantially spherical particles.

6. The battery of claim 5, wherein the gold salt is selected from the group consisting of gold (+3) oxide, gold (+3) sulfide, gold (+3) hydroxide, and gold (+3) acetate.

7. The battery of claim 6, wherein the cathode includes between 5 ppm and 1000 ppm of the gold salt.

8. The battery of claim 6, wherein the cathode includes between 10 ppm and 200 ppm of the gold salt.

9. The battery of claim 6, wherein the cathode includes between 15 ppm and 100 ppm of the gold salt.

10. The battery of claim 6, wherein the anode includes a gelling agent.

11. The battery of claim 1, wherein the nickel oxyhydroxide is cobalt oxyhydroxide-modified nickel oxyhydroxide.

12. The battery of claim 11, wherein the cobalt oxyhydroxide-modified nickel oxyhydroxide has a coating of a cobalt oxyhydroxide on a surface of a nickel oxyhydroxide.

13. The battery of claim 12, wherein the coating is substantially uniform.

14. The battery of claim 11, wherein the cobalt oxyhydroxide-modified nickel oxyhydroxide is derived from nickel hydroxide coated with between 2% and 10% cobalt hydroxide by weight.

15. The battery of claim 11, wherein the cobalt oxyhydroxide-modified nickel oxyhydroxide is derived from alpha-nickel hydroxide.

16. The battery of claim 11, wherein the cobalt oxyhydroxide-modified nickel oxyhydroxide is derived from beta-nickel hydroxide.

17. The battery of claim 11, wherein the gold (+3) salt is selected from the group consisting of gold (+3) oxide, gold (+3) sulfide, gold (+3) hydroxide, and gold (+3) acetate.

18. The battery of claim 17, wherein the anode includes a gelling agent.

19. The battery of claim 1, wherein the nickel oxyhydroxide is derived from alpha-nickel hydroxide.

20. The battery of claim 1, wherein the nickel oxyhydroxide includes a dopant including aluminum, cobalt, manganese or silver.

21. The battery of claim 1, wherein the cathode includes less than about 1,000 ppm of the gold (+3) salt.

22. The battery of claim 1, wherein the cathode includes between 5 ppm and 500 ppm of the gold salt.

23. The battery of claim 1, wherein the cathode includes between 10 ppm and 200 ppm of the gold salt.

24. The battery of claim 1, wherein the cathode includes NaOCl, $K_2S_2O_8$, $Na_2S_2O_8$, $KMnO_4$, $BaMnO_4$, $BaFeO_4$, $AgMnO_4$, or AgO.

25. The battery of claim 1, further comprising TeO_2, CaS, or Bi_2O_3.

26. The battery of claim 1, further comprising zinc oxide, calcium fluoride, NiO, MnO_2, $Zn(OH)_2$, CaO, $Ca(OH)_2$, $CaSO_4$, MgO, $Mg(OH)_2$, $MgSO_4$, $Ba(OH)_2$, $BaSO_4$, $Sr(OH)_2$, Yb_2O_3, $Y(OH)_3$, Er_2O_3, In_2O_3, Sb_2O_3, TiO_2, $BaTiO_3$, $CaTiO_3$, Gd_2O_3, Sm_2O_3, CeO_2, CdO, Ag_2O, BaO, $CaWO_4$, $CaSi_2O_5$, or $SrTiO_3$.

27. The battery of claim 1, wherein the battery is a primary battery.

28. The battery of claim 27, further comprising a thulium salt.

29. The battery of claim 28, wherein the thulium salt includes thulium (3+) oxide or thulium (3+) sulfate.

30. The battery of claim 27, wherein the capacity loss is less than 40% after storing the battery at 60°C for 4 weeks.

31. The battery of claim 27, wherein the capacity loss is less than 30% after storing the battery at 60°C for 4 weeks.

32. The battery of claim 27, wherein the capacity loss is less than 10% after storing the battery at 60°C for 4 weeks.

33. The battery of claim 1, wherein the cathode includes a conductive carbon.

34. A primary alkaline battery comprising:

a cathode comprising nickel oxyhydroxide and a gold salt selected from the group consisting of gold (+3) oxide, gold (+3) sulfide, gold (+3) hydroxide, and gold (+3) acetate;

an anode comprising zinc;

a separator between the anode and the cathode; and

an alkaline electrolyte.

35. The battery of claim 34, wherein the nickel oxyhydroxide includes beta-nickel oxyhydroxide.

36. The battery of claim 34, wherein the nickel oxyhydroxide includes gamma-nickel oxyhydroxide.

37. The battery of claim 34, wherein the nickel oxyhydroxide includes a mixture of beta-nickel oxyhydroxide and gamma-nickel oxyhydroxide.

38. The battery of claim 34, wherein the nickel oxyhydroxide includes unfractured, substantially spherical particles.

39. The battery of claim 34, wherein the cathode includes between 5 ppm and 500 ppm of the gold salt.

40. A method of manufacturing an alkaline battery, comprising:

obtaining a cathode mixture comprising nickel oxyhydroxide, a gold salt, and an alkaline electrolyte; and

assembling a cathode containing the cathode mixture, an anode comprising zinc, and a separator between the cathode and the anode to form the alkaline battery.

41. The method of claim 40, further comprising mixing an aqueous alkaline solution containing the alkaline electrolyte and a gold salt with nickel oxyhydroxide to form the cathode mixture.

42. The method of claim 40, wherein the nickel oxyhydroxide includes gamma-nickel oxyhydroxide, beta-nickel oxyhydroxide or mixtures thereof.

43. The method of claim 40, wherein the nickel oxyhydroxide includes a nickel oxyhydroxide cobalt oxyhydroxide modified-nickel oxyhydroxide.

44. The method of claim 40, wherein the nickel oxyhydroxide includes unfractured, substantially spherical particles.